

REMARKS

Claims 1-12 are pending. Claims 7 and 12 have been amended herein. Support for the amendment to claim 12 can be found throughout the specification, specifically at page 4, second paragraph. No new matter has been introduced. Reconsideration and entry of the amendment is requested based on the following remarks.

Claims 1-12 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Herbst et al. (U.S. Patent No. 6,887,814). Claims 1-11 have been indicated as being allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, 2nd paragraph. Reconsideration is earnestly solicited.

I. Claims 1-12 are Proper

Claims 1-12 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. According to the Examiner, the term “zeotype” throughout the claims renders the claims indefinite because the claims includes elements not actually disclosed (those encompassed by “type”). The Examiner relies on M.P.E.P. § 2173.05(d) to support her position. This section of the M.P.E.P. recites (in the relevant portion):

Description of examples or preferences is properly set forth in the specification rather than the claims. If stated in the claims, examples and preferences may lead to confusion over the intended scope of a claim. In those instances where it is not clear whether the claimed narrower range is a limitation, a rejection under 35 U.S.C. § 112, second paragraph should be made. The

examiner should analyze whether the metes and bounds of the claim are clearly set forth.

In the rejection, the Examiner appears to be parsing the term “zeotype” into the term “zeo” and “type” and then alleging that the term “type” renders the claims indefinite. Counter to the Examiner’s assertion, the term “zeotype” is clear and well understood by the person having ordinary skill in the art. The essential inquiry regarding whether the claims satisfy the requirement of 35 U.S.C. § 112, second paragraph is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. *See*, M.P.E.P. § 2173.02.

Here, the specification recites that the process for catalytic dehydrogenation of a dehydrogenatable hydrocarbon process stream includes contacting the dehydrogenatable hydrocarbon process stream under dehydrogenation conditions with a mesoporous zeotype catalyst having an intra-crystalline, non-crystallographic mesopore system and a mesopore volume of the zeotype crystals above 0.25 ml/g and comprising at least one element belonging to Groups 5-14 in the Periodic Table of the Elements. (Page, 2, lines 11-20).

The specification further recites that the catalyst comprises a mesoporous zeotype component and references the description in U.S. Patent Application No. 2002-

0034471 and U.S. Pat. No. 6,565,826 as well as the article, A. Dyer, AN INTRODUCTION TO ZEOLITE MOLECULAR SIEVES, J. Wiley and Sons, Chichester, 1988. (Page 3, line 27 – Page 4, line 2). The specification further recites that elements from Groups 5 to 14 that the zeotype catalyst comprises may include chromium (Cr), Molybdenum (Mo), Wolfram (W), Rhenium (Re), Rhodium (Rh), Iridium (Ir), Nickel (Ni), Palladium (Pd), Platinum (Pt), Copper (Cu), Silver (Ag), Zinc (Zn), Gallium (Ga), Indium (In) and Tin (Sn) in their metal form or as oxides, carbides or nitrides. (Page 4, lines 4-12). Thus, the specification describes the term “zeotype” with a reasonable degree of clarity and particularity.

In addition, the term “zeotype” is further known to the person having ordinary skill in the art at the time the application was filed. U.S. Patent No. 6,241,960 relates to a method for the preparation of small zeotype crystals and was filed on November 10, 1999. The ‘960 patent recites that zeotype is the collective name of zeolites and related compounds, where Si is partly or completely substituted by Al and/or P and/or metals and that zeolites are zeotypes with a low degree of Si substitution. (Col. 1, lines 8-12). Thus, the term “zeotype” analyzed, not in a vacuum, but in light of the specification, the prior art and the understanding of the person having ordinary skill in the art, sets out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Withdrawal of this rejection is solicited.

Claim 7 stands rejected as allegedly lacking sufficient support in claim 1 for the limitation “mesoporous zeolite.” Claim 7 has been amended herein to depend from claim 6. Withdrawal of this rejection is solicited in view of this amendment.

II. Claim 12 is not Anticipated by Herbst

Claim 12 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Herbst et al. ("Herbst"). This rejection is respectfully traversed.

Herbst discloses catalytic material comprising an immobilized homogeneous catalyst within zeolite crystals. According to Herbst, the homogeneous catalyst is a metal complex and it is immobilized in the zeolite crystals by introducing the metal ions and ligands or ligand precursors into the zeolite crystals sequentially.

In contrast to Herbst, claim 12 as amended, recites that the catalyst comprises at least one element "selected from the group consisting of Chromium (Cr), Molybdenum (Mo), Wolfram (W), Rhenium (Re), Rhodium (Rh), Iridium (Ir), Nickel (Ni), Palladium (Pd), Platinum (Pt), Copper (Cu), Silver (Ag), Zinc (Zn), Gallium (Ga), Indium (In) and Tin (Sn)." In order to maintain a rejection under 35 USC § 102, it is required that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 (quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)). Herbst does not disclose that the catalyst comprises the claimed elements. For at least these reasons, the rejection of claim 12 under 35 U.S.C. §102(e) should be withdrawn.

III. Obviousness-type Double Patenting

Claim 12 stands rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,887,814. Reconsideration of the rejection in light of the foregoing response is respectfully requested in view of the attached Terminal Disclaimer.

IV. Conclusion

In view of the above amendment, Applicant submits that the pending application is in condition for allowance, and such action is earnestly solicited.

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Respectfully submitted,

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